

Oral Session O08/Cariology 2

O08-47

Evaluation of the antimicrobial properties of *Punica granatum* Linn (pomegranate) and *Psidium guajava* Linn (guava) mouthwash against cariogenic microorganisms

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Background: Dental caries is a common microbial infection severely affecting overall health of an individual. A variety of synthetic antimicrobial agents used to prevent this disease, though beneficial have some side-effects. Since centuries plants materials have shown to possess therapeutic properties. Thus a biological approach might prove to be a better and safe alternative to prevent childhood caries.

Aim: Evaluate the antimicrobial properties of *Punica granatum* Linn (pomegranate) and *Psidium guajava* Linn (guava) mouthwash against oral microorganisms.

Design: *Punica granatum* Linn (pomegranate) fruit peels and *Psidium guajava* Linn (guava) plant leaves were collected and authenticated. Methanolic extract of the plant product was prepared. MIC of both the plant extracts was determined by micro-dilution method & mouthwash was prepared of desired concentration. In an in-vivo study, 45 clinically healthy (i.e. no systemic disease or dental caries) children in the age group of 6–12 years were randomly selected and divided into three groups. Children in each group were prescribed mouth wash specific for that group i.e. Chlorhexidin 2%, Pomegranate and Guava mouthwash. The antimicrobial property of the prepared mouthwashes was determined by comparing saliva culture and Plaque Index before and after use of mouthwash.

Results: The mouthwashes prepared with predetermined MIC showed reduction in saliva count of *Streptococcus mutans* and *Lactobacillus* and reduction of plaque index which were comparable to 2% chlorhexidin mouthwash (control group).

Conclusion: This study suggests that the extract of *Punica granatum* Linn (pomegranate) fruit peels and *Psidium guajava* Linn (guava) plant leaves might be used as a safe antibacterial agent in controlling oral infections.

Keywords: *Punica granatum* Linn (pomegranate), *Psidium guajava* Linn (guava), Cariogenic, *Streptococcus mutans*, *Lactobacillus*.

O08-48

Effects of two probiotic bacteria, and their synergism on salivary mutans streptococci of children when administered through Indian curd

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Background: Probiotics which are multistrain and multispecies were effective on micro-organisms causing systemic problems.

The effect of similar strains on caries causing microorganisms when administered through Indian curd was explored.

Aim: To evaluate the influence of *Lactobacillus reuteri*, *Bifidobacterium bifidum* and their blend on mutans streptococci in saliva of children and also to appraise the sustainability of their action when administered through Indian curd.

Design: A Randomized, double blind and placebo controlled study with 60 subjects between 6 and 14 years of age was conducted. Subjects consumed curd containing *Bifidobacterium bifidum* (UBBB 55, MTCC 5398), *Lactobacillus reuteri* (UBLRu 87, MTCC 5403) and their blend once daily for 14 days. The control group received curd with no Probiotic in it. The saliva samples were collected just before the administration of the curd (T0), to establish baseline levels of mutans streptococci and after a day of final consumption of the curd (T14). The follow up samples at 21 days (T21) and 28 days (T28) were collected to know the sustainability of their action on mutans streptococci.

Results: Statistically significant reduction of mutans streptococci was observed in group administered with *Lactobacillus reuteri* and its effect lasted for at least 21 days.

Conclusion: *Lactobacillus reuteri* in Indian curd was effective on salivary mutans streptococci and the effect was sustained for some time immediately after the administration. Mixed cultures seemed to be not effective against the oral microorganisms.

Keywords: Probiotic, Salivary mutans, Curd.

O08-49

Initial acquisition of mutans streptococci in Indonesian children

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Background: Mutans Streptococci (MS) are considered as major bacteria in human dental caries. Previous experiments reported that the earlier colonization of MS the higher dental caries risk in children. The high prevalence of dental caries in Indonesian children is assumed to be related with the age of initial acquisition.

Aim: The purpose of study was to determine the age of MS initial acquisition in Indonesian children.

Design: Subjects were 30 babies aged 5 months from Simomulyo, Surabaya City Indonesia. The plaque samples of subjects were collected each month for 6 months period. The MS isolation was done using BHI and TYC broth respectively. The determination of cultivated bacteria was done using gram staining and API20 Strep.

Results: Eighty three percent of children positively acquired MS and 17% children remain free from MS at the end of experiment. This study showed that the average MS initial acquisition age of children was 7, 76 ± 0.96 month.

Conclusion: The initial acquisition of MS in children at Simomulyo, Surabaya City, Indonesia was 7.76 ± 0.96 month.

Keywords: Initial Acquisition, Mutans Streptococci, Dental Caries, Children, Indonesian.

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Oral Session O01/Special Needs Patients 1

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O01-1
Designing a dental clinic protocol for children with autism

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Background: Autism Spectrum Disorder (ASD) often significantly impacts a child's ability to receive dental care. As a result of behavioral difficulties, children with ASD frequently require special difficulty escaping and receiving dental care. Parents of children with ASD also report present oral health and current dental needs that healthy peers. Equipping a child to accept dental procedures is a fundamental milestone on the road map to a lifetime of oral health.

Aim: Develop a dental clinic protocol which enables children with ASD to accept dental care through an individualized behavioral approach.

Design: An expert panel, consisting of physicians, parent advocates, social workers, nurse practitioners, pediatric and general dentists was assembled to develop best practices for treating children with ASD. An ASD specific clinic protocol was then designed for a new care venue within a university-based pediatric dental clinic.

Results: Best practices for treating children with ASD included efficient clinical procedures, thorough pre-visit information gathering including patient strengths and abilities, previous dental experiences, behavioral triggers, special accommodations, and effective reward strategies pre-visit social history preparation, role of dental faculty, individualized behavioral evaluation, and step wise approach to achieving treatment goals. The protocol was implemented in October 2012.

Conclusion: Through improved communication with parents and caregivers and individualized patient accommodations, it is possible to design a dental experience that equips children with ASD for a lifetime of oral health.

Keywords: Autism, Behavior Management, Children with Special Health Care Needs.

O01-2

The dilemma of reporting child abuse and neglect-talking with pediatric dentists

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Background: Dental professionals are mandated to report suspected child abuse and neglect to the social services. There are clinical guidelines to follow when to file a report. Previous studies show that a report is more likely with existing guidelines through the decision is influenced by knowledge of routines and previous experiences on reporting.

Aim: To understand the context of child abuse and neglect from the view of pediatric dentists and how they argue for the decision to report or not to report to the social services.

Design: Four focus groups of pediatric dentists from different parts in Sweden were included in the study. Open-type recorded discussions with 2-3 participants in each group were performed. The data was transcribed and analyzed by thematic analysis.

Results: Pediatric dentists are reflecting on specific needs of a child during the clinical encounter and it is important to establish a good working relation. Two themes emerged, the obvious case and the interpretation case. The decision to report is obvious when there is evidence of dental neglect or if a diagnosis of abuse occurs whereas the decision to report is difficult when other factors than dental needs are the main concern. For example, a patient's or parent's behavior. The borderline between these themes is blurred and they can overlap under certain circumstances.

Conclusion: The results show that pediatric dentists are confident and reflective regarding the well-being of a child. Despite guidelines, they still face uncertainty or when to report to the social services and this dilemma must be acknowledged.

Keywords: Child abuse and neglect, Pediatric dentistry, Focus groups, Professional role.

O01-3

Sociography and qualitative approach to the patient with special needs

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Background: Sociography is a branch of sociology that concentrates on the descriptive analysis based on observing the social-relational constructs of the individual and his social environment.

Aim: To present the benefits of a qualitative approach based on sociographic parameters for the special needs patient.

Design: In-depth interviews using sociographic and sociometric parameters were conducted including video records and qualitative analysis of data to identify specific strategies, barriers to oral medicine of dental care. This information was analyzed to design specific behavior management techniques for each patient and his family combined with therapeutic alliance.

Results: One hundred and three patients were interviewed in the Special Needs Clinic at University of Chile in 2012. This technique was particularly helpful for obtaining responses to conventional dental treatment in patients with the Autism Spectrum Disorder, Proliferative Warts Syndrome and Williams Syndrome. The benefits observed in patients with other diagnoses included behavioral hygiene and treatment compliance. These skills will be presented using video materials.

Conclusion: The use of a qualitative approach based on sociographic tools promoting the well-being of the patient has allowed a positive psychological conditioning to conventional dental treatment and improved treatment compliance.

Keywords: Sociography, Qualitative approach, Special needs patients.



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